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EXAMINER	
DIVECHA, KAMAL B	

  

ART UNIT	PAPER NUMBER
2151	

  

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

09/991,234

Applicant(s)

CHANDRA ET AL.

Examiner

KAMAL B. DIVECHA

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 6-9, 23-25 and 30-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-9, 23-25, 30-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

Claims 6-9, 23-25, 30-33 are pending in this application.

Claims 1-5, 10-22, 26-29 were previously cancelled.

**Continued Examination Under 37 CFR 1.114**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed on May 25, 2007 in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 25, 2007 has been entered.

**Response to Arguments**

Applicant's arguments filed on May 25, 2007 in association with a request for continued examination (RCE) have been fully considered but they are not persuasive.

In response filed, applicant argues in substance that:

- a. Rekhtar does not disclose maintaining some VPN forwarding information in a common VPN forwarding table and other VPN forwarding information in separate VPN tables (remarks, pg. 8).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., maintaining some VPN forwarding information in a common VPN forwarding table and other VPN forwarding information in separate VPN tables) are not recited in the rejected claim(s).

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Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

b. Applicant respectfully submits that Rekhtar does not teach or suggest applicant's claims. In particular, Rekhtar discloses either maintaining separate FIBs for each VPN or a common FIB table for all the VPNs. However, Rekhtar does not teach or suggest maintaining EGP forwarding information for the VPNs in a single VPN forwarding table and non-EGP forwarding information in separate tables for each VPN (Remarks, pg. 8). That is Rekhtar does not teach "...maintaining a single exterior gateway protocol table for the first and second layer 3 VPNs, wherein the single EGP table comprises EGP forwarding entries for the first and second layer 3 VPNs; maintaining a first routing table for the first layer 3 VPN, wherein the first routing table comprises non-EGP forwarding entries for the first layer 3 VPN; and maintaining a second routing table for the second layer 3 VPN, wherein the second routing table comprises non-EGP forwarding entries for the second layer 3 VPN" (remarks, pg. 8-9).

In response to argument [b], Examiner respectfully disagrees.

As set forth in previous office action, page 6, Rekhtar, at column 33 line 36, clearly states: "Also, although we have described VPN-specific information as being stored in separate tables because the approach seems most convenient, there is no reason in principle why a common table containing VPN-identifying entries could not be used instead".

In other words, Rekhtar teaches maintaining a common table, i.e. a single EGP table for the VPNs such as VPN V, VPN W, etc.

As per Rekhtar, the common FIB and/or EGP table is built and/or modified by external routing protocols, such as External Gateway Protocol (EGP). For the sake of concreteness, we assume here that the external routing protocol used herein is ...Border Gateway Protocol (BGP) (See col. 12 L41-67).

Therefore it is clear that the common or single FIB table above includes EGP forwarding entries for the first and second layer 3 VPNs.

Initially, the limitation “non-EGP forwarding entries for the first layer 3 VPN” raises a 35 U.S.C. 112, second paragraph issues (See the detailed rejection below).

Furthermore, Rekhtar throughout the disclosure clearly discloses that a normal Internet router only maintains one FIB table. But...Each SP router also needs to maintain a general, i.e. non VPN-specific, FIB. And an edge router such as PE1 And PE2 needs to maintain, in addition to a general FIB, a separate FIB only for each VPN to which it is connected directly (See col. 9 L28-44).

A general FIB is logically equivalent to a routing table for the first layer 3 VPN, wherein the table comprises non-VPN specific information, i.e. it includes the entries that is not in VPN specific FIB table, wherein the entries in the VPN-specific table is generated and/or modified through EGP and BGP.

Furthermore, as per Rekhtar, the routers are associated with a tag information Base (TIB), a routing table separate form the FIB (See col. 10 L40-67).

Rekhtar also discloses: “routers in an internetworking domain under single administration use IGPs to share topological information about the domain, and routers use EGPS to share extra-domain topological information. Typically every router runs an IGP (See col. 11 L6-33).

The running of an IGP suggests the usage of IGP table different than the EGP table.

Additionally, according to applicant specification, page 7 [0026], pg. 8 [0028-0029], “the routing table comprising non-EGP forwarding entries” as in the claims could be IGP table and/or a local routing table since the specification actually fails to clearly disclose a “routing table comprising non-EGP information.”

Therefore, Rekhtar does teach and disclose a single EGP table, a first routing table and a second routing table as in claim 6, and as set forth above.

For at least these reasons, the rejection is maintained.

**Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 6-9, 23-25, 30-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 discloses "...maintaining a first routing table for the first layer 3 VPN, wherein the first routing table comprises a non-EGP forwarding entries for the first layer 3 VPN; and maintaining a second routing table for the second layer 3 VPN, wherein the second routing table comprises non-EGP forwarding entries for the second layer 3 VPN".

The teachings "non-EGP forwarding entries" associated with the first and second routing tables in the claim are unclear. It is unclear whether the entries are associated with IGP table, a local routing table or other forwarding table.

It is also noted that the specification does not provide a clear disclosure regarding this subject matter.

For examination purposes, the limitation will be interpreted as a routing table comprising information and/or routing table comprising information that is not obtained through EGP and BGP protocols.

Claims 7-9, 23-25, 30-33 are rejected for the same reasons as set forth in claim 6.

**Claim Rejections - 35 USC § 101**

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 23-25 and 30-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 23-25, 30-33 are non-statutory because specification is evidenced to define the “machine-readable medium” to include read only memory, random access memory, magnetic disk storage media, optical storage media, flash memory devices, electrical, optical, acoustical, or other form of propagated signals (e.g. carrier waves, infrared signals, digital signals, etc.), which does not fall within any of the four classes and/or categories of patentable subject matter set forth in 35 U. S. C. § 101.

Claims that recite nothing but the physical characteristics of a form of energy, such as frequency, voltage or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U. S. (15 How.) at 112-14.

In response filed, applicant states “applicant respectfully submits that the Examiner indicated the proposed claim amendments would overcome the 101 rejection”, However, Examiner suggested to include a “computer and/or machine readable storage medium” in the claims to overcome the 35 U.S.C. 101 rejections.



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3. Claims 6-9, 23-25 and 30-33 rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility.

Initially, it appears that the claims are directed towards a data structure that fails to produce useful, concrete and tangible results. The process of maintaining routing tables and/or EGP tables is not equivalent to useful, concrete and tangible results because routing tables are simply data structures.

See MPEP § 2106 (IV) for more on compliance with 35 U.S.C. 101.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 6-9 and 23-25, and 30-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Rekhtar et al. (hereinafter Rekhtar, U. S. Patent No. 6,339,595 B1).

As per claim 6, Rekhtar discloses a computer implemented method comprising:  
maintaining a first context for a first layer 3 VPN, the first context including a first value identifying the first layer 3 VPN (col. 18 L28 to col. 19 L60, col. 20 L60-62); separately maintaining a second context for a second layer 3 VPN, the second context including a second value identifying the second layer 3 VPN, wherein the first and second sets of information corresponds to a first and second customers accessing a backbone and maintained within a single network element of the backbone, and wherein the first and second sets of information include sufficient information to establish the first and second layer 3 VPNs with other network elements of the backbone for the first and second customer respectively (col. 18 L28 to col. 20 L4); associating the first value with a first route distinguisher (col. 19 L52-56); associating the second value with a second route distinguisher (col. 18 L12 to col. 19 L4); maintaining a single EGP table for the first and second layer 3 VPNs, wherein the single EGP table comprises EGP forwarding entries for the first and second layer 3 VPNs (col. 11 L13-18, col. 33 L29-41: FIB entries obtained through EGP protocol); maintaining a first routing table for the first layer 3

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VPN, wherein the first routing table comprises a non-EGP forwarding entries for the first layer 3 VPN; and maintaining a second routing table for the second layer 3 VPN, wherein the second routing table comprises non-EGP forwarding entries for the second layer 3 VPN (col. 4 L34-38, col. 6 L41-50, col. 8 L56-67, col. 9 L28-44: general FIB in addition to the separate VPN specific FIB, col. 10 L40-45: routing table separate from FIB, col. 11 L5-44, col. 12 L40 to col. 13 L34).

As per claim 7, Rekhtar discloses the process of separately maintaining a third context for a non-VPN customer, the third context including a third value identifying the non-VPN customer (col. 9 L32-62) and maintaining a second EGP table for the non-VPN customer (col. 9 L32-44 and col. 11 L15-18).

As per claim 8, Rekhtar discloses the process of updating a set of entries for the first layer 3 VPN in the single EGP table, each of the set of entries indicating the first route distinguisher (col. 11 L5-60 and col. 16 L5-33); mapping the first route distinguisher to the first value (col. 18 L12-67) and indicating the mapped first value in communication about the updated set of entries (col. 19 L5-67, col. 12 L65-67, col. 19 L61 to col. 20 L4).

As per claim 9, Rekhtar discloses the process of maintaining a data structure for the single EGP table, the data structure indicating the association between the first value and the first route distinguisher and between the second value and the second route distinguisher (col. 19 L5 to col. 20 L32, col. 8 L56 to col. 9 L51) and performing mappings between the first value and the first route distinguisher and between the second value and the second route distinguisher with the data structure (col. 11 L45-59, col. 12 L65 to col. 13 L35, col. 18 L58-67, col. 19 L52-56).

As per claim 25, Rekhtar discloses the process wherein the mappings are performed for communications about the single EGP table (col. 19 L5 to col. 20 L3).

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As per claims 23-24 and 30-33, they do not teach or further define over the limitations in claims 6-9 and 25. Therefore, claims 23-24 and 30-33 are rejected for the same reasons as set forth in claims 6-9 and 25.

**Additional References**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Arrow et al., U. S. Patent No. 6,226,751 B1.
- b. Tabata, Pub. No.: US 2001/0016914 A1.
- c. Rekhtar et al., U. S. Patent No. 6,526,056 B1.
- d. Rekhtar et al., U. S. Patent No. 6,463,061 B1.
- e. Cheline et al., Pub. No.: US 2003/0041136 A1.
- f. Gonda et al., U. S. Patent No. 6,662,221 B1.
- g. Branigan et al., Pub. No.: US 2002/0090089 A1.

**Conclusion**

This Action is made Non-Final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on Increased Flex Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kamal Divecha/

Kamal Divecha  
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A handwritten signature in black ink, appearing to read 'Kamal Divecha', with a long horizontal flourish extending to the right.